JVC VIDEO CASSETTE RECORDER HR-J7020UM

VHS SQPB Hi-Fi

INSTRUCTIONS

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Dear Customer,
Thank you for purchasing the JVC VHS video cassette recorder. Before use, please read the safety information and precautions to ensure safe use of your new VCR.

¡ATENCION!
Antes de operar su equipo, lea cuidadosamente este instructivo.

CAUTIONS

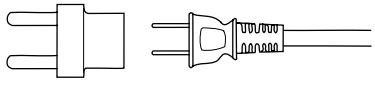
WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

The POWER ⏻/I button does not completely shut off mains power from the unit, but switches operating current on and off. "⏻" shows electrical power standby and " I " shows ON.

This unit is produced to comply with Standard IEC 60065.

POWER SYSTEM:
This set operates on voltage of AC 110 – 220V∿, 50 Hz/60 Hz with automatic switching.

Use the conversion plug (provided) depending on the type of your AC WALL outlet.



The rating plate and safety caution are on the rear of the unit.

IMPORTANT:
It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.

CAUTION
- When you are not using the VCR for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.
- Changes or modifications not approved by JVC could void user's authority to operate the equipment.

Caution on Replaceable lithium battery
The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate.
Replace battery with CR2032. Panasonic (Matsushita Electric) or Maxell is recommended.
Danger of explosion or Risk of fire if the battery is incorrectly replaced.
- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

VHS SQPB HQ

- Cassettes marked "VHS" (or "S-VHS") can be used with this video cassette recorder. However, S-VHS recordings is not possible with this model.
- This model is equipped with SQPB (S-VHS QUASI PLAYBACK) that makes it possible to play back S-VHS recordings with regular VHS resolution.
- HQ VHS is compatible with existing VHS equipment.

When the equipment is installed in a cabinet or a shelf, make sure that it has sufficient space on all sides to allow for ventilation (10 cm or more on both sides, on top and at the rear).

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

Failure to heed the following precautions may result in damage to the VCR, Remote or video cassette.

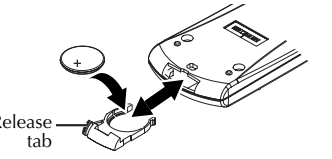
1. DO NOT place the VCR ...
   ... in an environment prone to extreme temperatures or humidity.
   ... in direct sunlight.
   ... in a dusty environment.
   ... in an environment where strong magnetic fields are generated.
   ... on a surface that is unstable or subject to vibration.
2. DO NOT block the VCR's ventilation openings or holes. (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
3. DO NOT place heavy objects on the VCR or Remote.
4. DO NOT place anything which might spill on top of the VCR or Remote. (If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)
5. DO NOT expose the apparatus to dripping or splashing.
6. DO NOT use this equipment in a bathroom or places with water. Also DO NOT place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups, etc.) on top of this unit.
7. DO NOT place any naked flame sources, such as lighted candles, on the apparatus.
8. AVOID violent shocks to the VCR during transport.

MOISTURE CONDENSATION

Moisture in the air will condense on the VCR when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the VCR's power turned on for a few hours to let the moisture dry.

How to use the Remote

Before use, insert the lithium battery — CR2032 — correctly, with the plus(+) side up into the battery compartment. To open it, press the release tab and carefully, pull the compartment out.



The Remote can operate most of your VCR's functions, as well as basic functions of JVC TVs.

- Point the Remote towards the remote sensor on the target component. The maximum operating distance is about 8 m.
- To operate a JVC TV, use any of the following buttons: **TV POWER**, **TV INPUT**, **TV CH+/–** or **TV VOL +/–**.

NOTE:
If the Remote does not work properly, remove its battery, wait for a few seconds, replace the battery and then try again.

Video heads cleaning

The heads get dirty in the following cases:

- in an environment prone to extreme temperature or humidity.
- in a dusty environment
- flaw, dirt or mold on video tapes
- continuous usage for a long time

Use a dry cleaning cassette — TCL-2 — when:

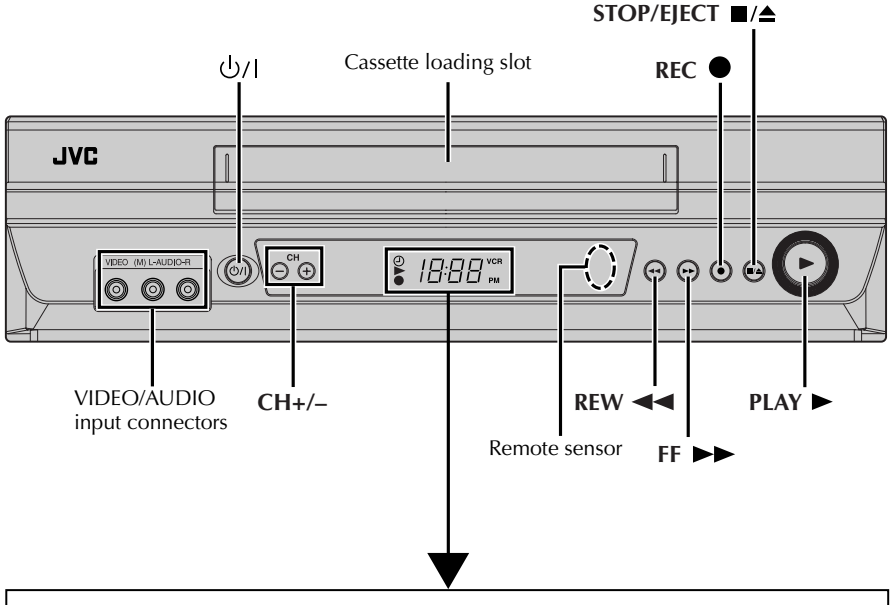
- Rough, poor picture appears while a tape is played back.
- The picture is unclear or no picture appears.
- "USE CLEANING CASSETTE" appears on the screen (only with "SUPERIMPOSE" set to "ON") (☞ pg. 14).

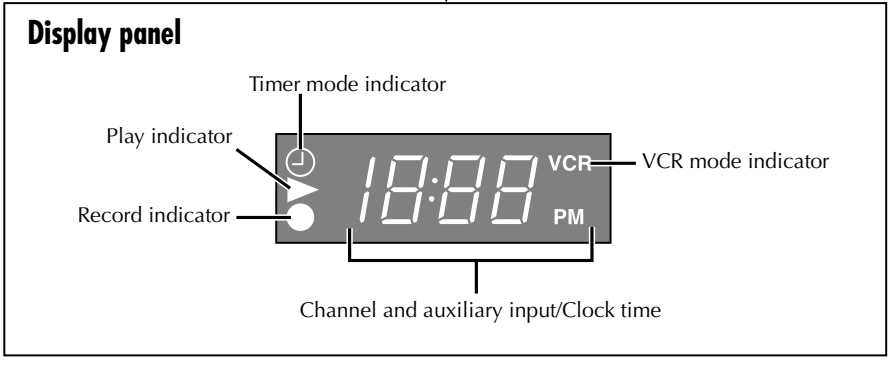
ATTENTION
To mobile phone user:
Using a mobile phone in the vicinity of the VCR may cause picture vibration on the TV screen or change the screen to a blue back display.
On placing the VCR:
Some TVs generate strong magnetic fields.

- Make sure to place the VCR at least 20 cm (7 or 8 inches) away from a TV.
- DO NOT place the VCR close to a TV as it may cause noise, picture disturbance or malfunctions (power off, etc.) to occur.

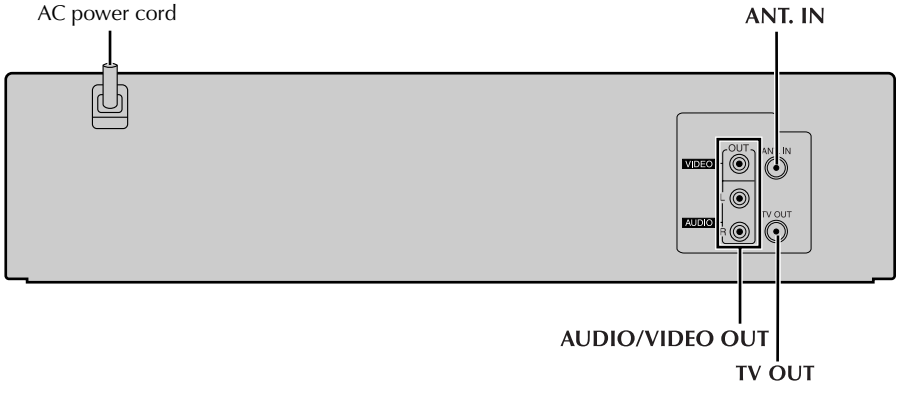
Buttons, Connectors and Indicators

Front Panel

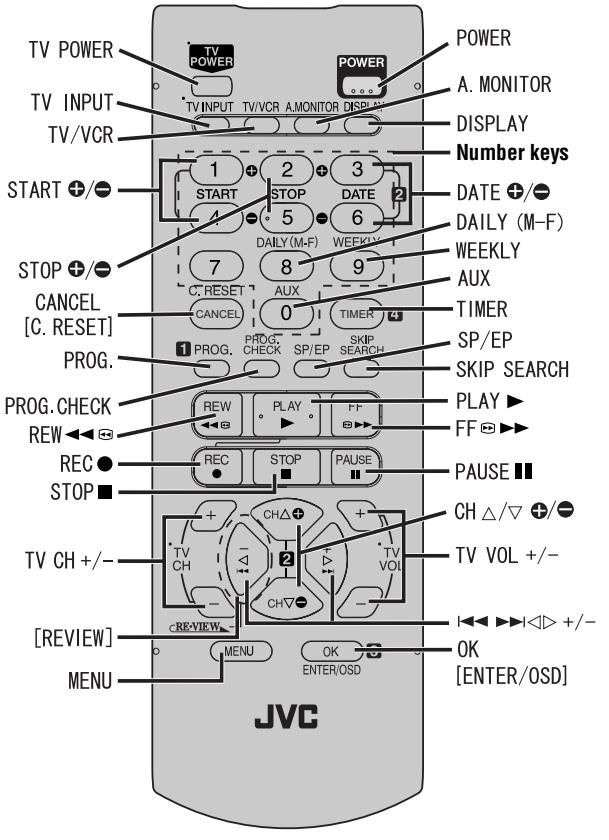




Rear Panel

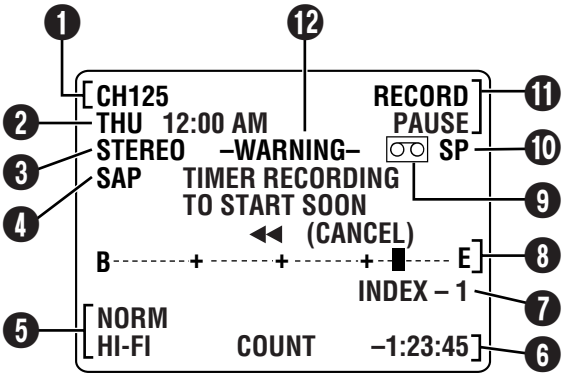


Remote



On-screen display

If you press **OSD** (**OK**) on the Remote when "SUPERIMPOSE" is set to "ON"(☞ pg. 14), you can see the current VCR status on the TV screen. To clear the time counter, press **OSD** (**OK**) again. The indications are not recorded even if the VCR is in the recording mode.



❶ Channel and auxiliary input
❷ Day and clock time
❸ STEREO program indication
❹ SAP indication
❺ Audio monitor indications
❻ Time counter
❼ Index number
❽ Tape position
❾ Cassette mark
❿ Tape speed
⓫ VCR operation mode
⓬ Timer warning display

To recall an indication

1 Press **OSD** (**OK**).
- All indications corresponding to the current status are displayed for 5 seconds. After that, the counter information and RECORD/PAUSE (if in the Record Pause mode), are left displayed on the screen.

2 Press **OSD** (**OK**) again to clear the display.
- The RECORD/PAUSE indication is left displayed on the screen.

Basic Connections

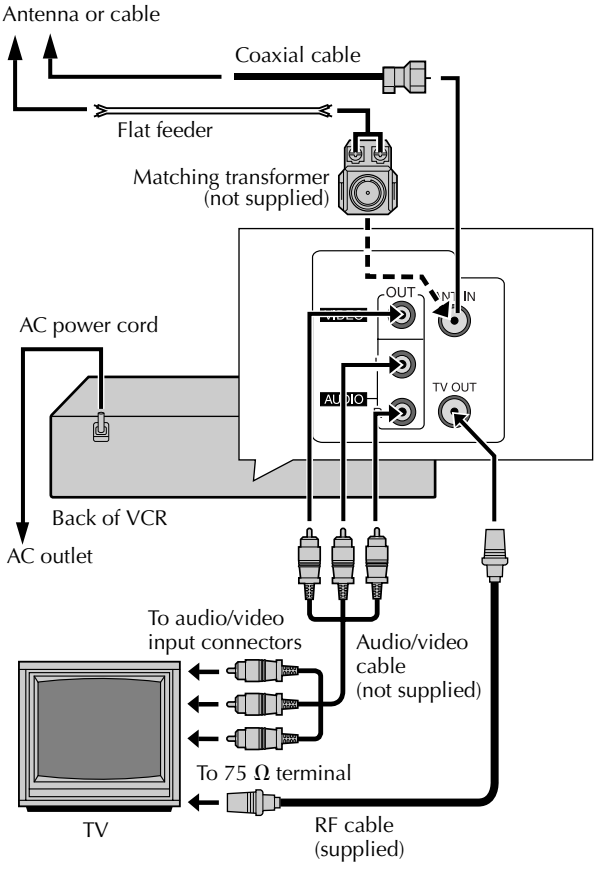
1 Check contents

Make sure the package contains all of the accessories listed in "Specifications" (☞ pg. 16).

2 Situate VCR

Place the VCR on a stable, horizontal surface.

3 Connect VCR to TV



RF Connection

1 Disconnect the TV antenna from the TV.
2 Connect the TV antenna cable to the ANT. IN terminal on the rear of the VCR.
3 Connect the supplied RF cable between the TV OUT terminal on the rear of the VCR and the TV's antenna input terminal.

AV Connection

(improves picture quality during tape playback.)
If your TV is equipped with audio/video input connectors
1 Connect the antenna, VCR and TV as shown in the illustration.
2 Connect an audio/video cable between the AUDIO/VIDEO OUT connectors on the rear of the VCR and the audio/video input connectors on the TV.

- Even if you are using audio/video cables to connect your VCR to your TV, you must also connect it using the RF cable. This will ensure that you can record one show while watching another.

4 Connect VCR to power source

Plug the AC power cord into an AC outlet.

5 Set VCR channel

The VCR channel is the channel on which you can watch the picture from the VCR on the TV when only using the RF connection. When the VCR is turned off, press **STOP/EJECT** (■/⏏) on the VCR for more than 5 seconds. "CH3" appears on the display panel. Press **CH** △/▽ on the Remote to select "CH3", "CH4" or "CH–"(OFF), then press **OK**.

- If Plug&Play or Tuner setting has not previously been performed, the Language Select screen appears and Plug&Play takes place automatically.
- The VCR channel is preset to "CH3". Set to "CH4" if CH3 is used for broadcasting in your area.

6 Final preparation for use

Turn on the VCR and the TV, and select the VCR channel 3 or 4 (or AV mode) on the TV.

- If you connect the TV and the VCR only using the RF connection, press **TV/VCR** on the Remote so that the VCR mode indicator lights on the display panel.

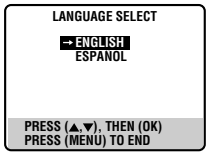
Initial Settings

Plug&Play Setting

1 Perform Plug&Play setup

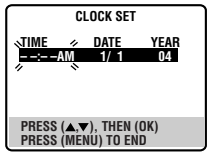
Press ⏻/I.
- The Language Select screen appears.

2 Select language



Press △▽ to move the highlight bar (arrow) to your desired language (ENGLISH or ESPAÑOL), then press **OK** or ▷.
- The Clock Set screen appears.

3 Set time



Press △▽ to set the hour, then press **OK** or ▷.
- Press and hold either button to delay or advance the time by 30 minutes.

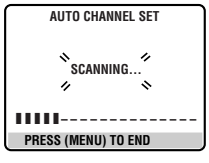
4 Set date

Press △▽ to set the date, then press **OK** or ▷.
- Press and hold either button to change the date by 15 days.

5 Set year

Press △▽ to set the year.

6 Start auto channel set



Press **MENU**.
- Receivable channels in your area are automatically assigned to the **CH+/–** or **CH** △/▽ buttons, and non-receivable channels are skipped.
- If the tuner channels have been set properly "SCAN COMPLETED" will be displayed on the screen. If "SCAN COMPLETED–NO SIGNAL–" is displayed on the screen, make sure that the antenna cable is connected to the VCR properly and press **OK** or ▷ on the Remote. The VCR will try Auto Channel Set again.

7 Return to normal screen

Press **MENU**.

ATTENTION

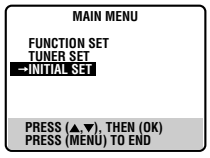
Eventhough you have performed Plug&Play setting correctly, if there is a power failure or the AC has been disconnected from the VCR, the clock setting will not be stored. Once the power is restored, the Clock Set screen appears when you turn on the VCR. Perform steps 3 - 5 of "Clock Setting" to reset the clock.

Language Setting

Use language setting only if the language have not been set correctly by the Plug&Play setting. The default setting is "ESPAÑOL".

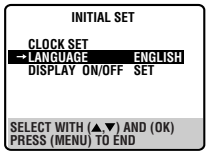
Turn on the VCR and TV, and select the VCR channel (or AV mode).

1 Access Main Menu screen, then Initial Set screen



Press **MENU** on the Remote. Press △▽ to move the highlight bar (arrow) to "INITIAL SET", then press **OK** or ▷.

2 Select language



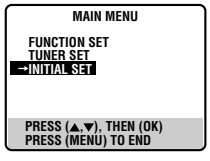
Press △▽ to move the highlight bar (arrow) to "LANGUAGE", then press **OK** or ▷ repeatedly until the desired language is selected.
Press **MENU** to return to normal screen.

Clock Setting

Perform clock setting only if the clock has not been set correctly by the Plug&Play setting.

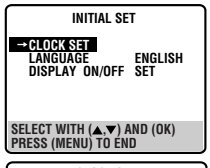
Turn on the VCR and TV, and select the VCR channel (or AV mode).

1 Access Main Menu screen, then Initial Set screen



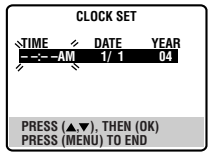
Press **MENU** on the Remote. Press △▽ to move the highlight bar (arrow) to "INITIAL SET", then press **OK** or ▷.

2 Access Clock Set screen



Press △▽ to move the highlight bar (arrow) to "CLOCK SET", then press **OK** or ▷.

3 Set time, date and year



Press △▽ until the desired time appears, then press **OK** or ▷. Set the date and year in the same way.
- Holding △▽ changes the time in 30-minute intervals, or changes the date in 15-day intervals.

4 Start clock

Press **MENU** and normal screen appears.

To make corrections any time during the process
Press **OK** or ▷ repeatedly until the item you want to change blinks, then press △▽.

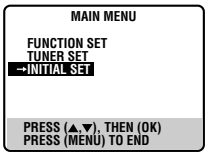
Display On/Off Setting

You can reduce the power consumption while the VCR is turned off (in standby mode) or during timer recording standby mode. To use this function, set the "DISPLAY ON/OFF SET" to "OFF". Turn off the VCR by pressing the ⏻/I button on the VCR only.

Turn on the VCR and TV, and select the VCR channel (or AV mode).

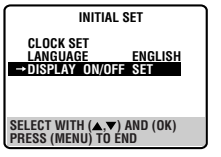
1 Access Main Menu screen, then Initial Set screen

Press **MENU** on the Remote. Press △▽ to move the highlight bar (arrow) to "INITIAL SET", then press **OK** or ▷.



2 Access Display On/Off Set screen

Press △▽ to move the highlight bar (arrow) to "DISPLAY ON/OFF SET", then press **OK** or ▷.



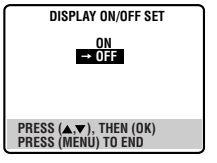
3 Select Display On/Off

Press △▽ to move the highlight bar (arrow) to "ON" or "OFF", then press **OK** or ▷.

During standby mode,

ON - The clock display on the display panel turns dimmer (default setting).

OFF - The clock display on the display panel disappears.



4 Press MENU to return to normal screen.

NOTES:

- *If the "DISPLAY ON/OFF SET" is set to "OFF" and you are in the timer recording standby mode, (☞ pg. 11), press ⏻/I on the VCR to make the clock display disappear. (Only "◴" is displayed). Press ⏻/I again on the VCR to make the clock display reappear. The above operation does not work if you set "AUTO TIMER" to "ON" (☞ pg. 13).*
- *The "display off" mode does not work if you turn off the VCR by pressing the ⏻/I button on the remote control.*

Tuner Setting

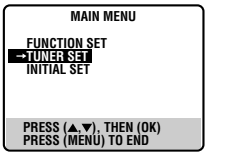
Setting channels automatically — Auto Channel Set

Perform Auto Channel Set only if channels have not been set correctly by the Plug&Play setting.

Turn on the VCR and TV, and select the VCR channel (or AV mode).

1 Access Main Menu screen, then Tuner Set screen

Press **MENU** on the Remote. Press △▽ to move the highlight bar (arrow) to "TUNER SET", then press **OK** or ▷.

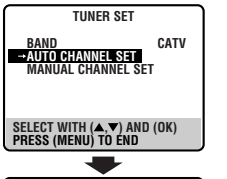


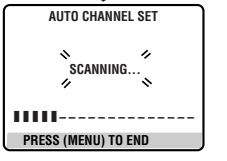
2 Perform Auto Channel Set

Press △▽ to move the highlight bar (arrow) to "AUTO CHANNEL SET", then press **OK** or ▷. The VCR selects the correct band (TV or CATV) automatically during Auto Channel Set.

- When Auto Channel Set is complete, "SCAN COMPLETED" appears on screen.
- If the scan was unsuccessful, "SCAN COMPLETED–NO SIGNAL–" appears on screen. Check the connections and start again.

Press **MENU** to return to normal screen.





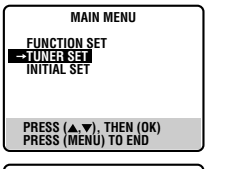
Setting channels manually — Manual Channel Set

You can add the channels you want or delete the channels you do not want manually.

Turn on the VCR and TV, and select the VCR channel (or AV mode).

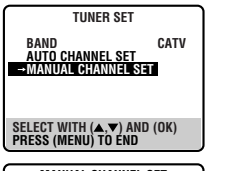
1 Access Main Menu screen, then Tuner Set screen

Press **MENU** on the Remote. Press △▽ to move the highlight bar (arrow) to "TUNER SET", then press **OK** or ▷.



2 Access Manual Channel Set screen

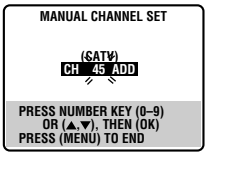
Press △▽ to move the highlight bar (arrow) to "MANUAL CHANNEL SET", then press **OK** or ▷.



3 Add or skip desired channels

To add channels

1. Press the **Number keys** on the Remote to input a channel number you want to add.
2. Press **OK** or ▷ to set to "ADD".
3. Repeat 1 to 2 to add other channels. Press **MENU** to return to normal screen.



To skip channels

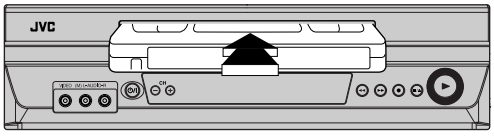
1. Press △▽ or the **Number keys** to select a channel number you want to skip.
2. Press **OK** or ▷ to set to "SKIP".
3. Repeat 1 and 2 to skip other channels. Press **MENU** to return to normal screen.

Playback

Basic Playback

Turn on the VCR and TV, and select the VCR channel (or AV mode).

1 Load a cassette



Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the VCR.

- Do not apply too much pressure when inserting.
- The VCR turns on, and the counter on the on-screen display is reset, automatically.
- If the cassette's record safety tab has been removed, playback begins automatically.

2 Start playback

Press **PLAY** (►).

During playback

Stop playback

Press **STOP** (■) on the Remote. **OR** Press **STOP/EJECT** (■ / ⏏) on the VCR.

Pause playback and view still picture

Press **PAUSE** (❚❚).

- Press **PLAY** (►) to resume normal playback.

NOTE:

*During still picture, vertical vibration may appear on the TV screen. Press **CH** △/▽ on the Remote to get a clearer picture.*

Pause and Frame-by-Frame playback

Press **PAUSE** (❚❚) to pause, then press ►►I or **PAUSE** (❚❚) repeatedly.

- Press **PLAY** (►) to resume normal playback.

Picture search

Press **REW** (◄◄) or **FF** (►►). Press **REW** (◄◄) or **FF** (►►) again to perform high-speed search.

- Each time you press **REW** (◄◄) or **FF** (►►), the search speed changes between low-speed and high-speed.
- Press **PLAY** (►) to resume normal playback.

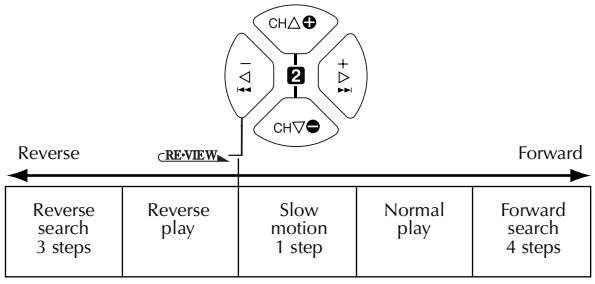
Variable-Speed Picture Search (including slow-motion)

Press I◄◄ or ►►I repeatedly.

- Press **PLAY** (►) to resume normal playback.
- Each time you press I◄◄ or ►►I, the playback speed changes. To decrease the speed during picture search, press the opposite direction button repeatedly.
- During still picture, press and hold ►►I to start forward slow motion playback. When you release the button, still picture resumes. During still picture, holding **PAUSE** (❚❚) for more than 2 seconds also starts forward slow motion playback. If you press **PAUSE** (❚❚) again, still picture resumes.

NOTE:

*During slow motion, some noise may appear on the TV screen. Press **CH** △/▽ on the Remote to eliminate the noise.*



When the tape is not running

Rewind/fast-forward

Press **REW** (◄◄) or **FF** (►►).

Eject the tape

Press **STOP/EJECT** (■ / ⏏).

- You can also eject the cassette when the VCR is turned off.

Turn off the VCR

Press **POWER** ⏻/I.

Playback Features

Turn on the VCR and TV, and select the VCR channel (or AV mode).

Adjusting tracking condition — tracking adjustment

Automatic tracking adjustment

Whenever you insert a tape and start playback, automatic tracking starts working and continuously analyzes the signal to enable optimum picture quality during playback.

Manual tracking adjustment

If automatic tracking cannot eliminate noises well during playback, follow the procedures below.

1. Press **SP/EP** on the Remote during playback to activate manual tracking.
2. Press **CH** △/▽ to eliminate the noises. Press it briefly for a fine adjustment, or press and hold for a coarse adjustment.
   - Press **SP/EP** again to reactivate automatic tracking.

Selecting monitor sound — Audio Monitor

While playing back a tape on which stereo sound or SAP sound is recorded, press **A. MONITOR** on the Remote. Each time you press the button, sound changes.

HI-FI: Normally select this. Hi-Fi sound is played back.
HI-FI L: Sound on the left Hi-Fi channel is played back.
HI-FI R: Sound on the right Hi-Fi channel is played back.
NORM: Sound on the normal track is played back.
NORM HI-FI: Both sounds on the Hi-Fi track and normal track are mixed and played back.

NOTE:

The above indication appears when "SUPERIMPOSE" is set to "ON" (☞ pg. 14), though the monitor sound changes in sequence.

Automatic operations after rewinding — Next Function Memory

The Next Function Memory "tells" the VCR what to do after rewinding is complete. Ensure that the VCR is in stop mode.

- **For Automatic Playback Start**

Press **REW** (◀◀), then press **PLAY** (▶) within 2 seconds.

- **For Automatic Power Off**

Press **REW** (◀◀), then press **POWER** ⏻/I within 2 seconds.

- **For Automatic Timer Standby**

Press **REW** (◀◀), then press **TIMER** within 2 seconds.

NOTE:

It is not possible to select the Automatic Timer Standby function if the cassette's record safety tab is removed.

Playing back tape repeatedly (100 times) — Repeat Play

During playback, press and hold **PLAY** (▶) for more than 5 seconds. The play indicator (▷) on the display panel starts blinking slowly. To stop playback, press **STOP** (■) on the Remote or **STOP/EJECT** (■ / ⏏) on the VCR.

NOTE:

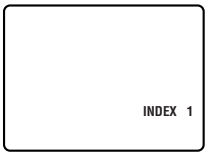
*Pressing **PLAY** (▶), **REW** (◀◀), **FF** (▶▶) or **PAUSE** (❚❚) also cancels repeat playback.*

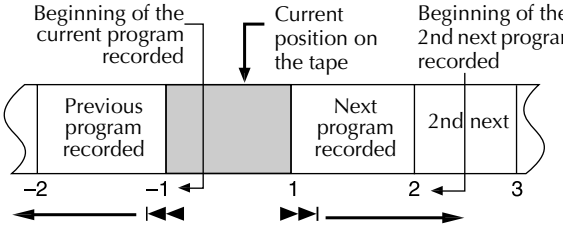
Locating beginning of recordings — Index Search

Index codes are placed on the tape at the beginning of each recording when recording on this VCR.

1 While the tape is not running, press ◁ or ▷ (I◀◀ or ▶▶I) on the Remote to start search.

2 To access a recording of 2 to 9 index codes away, press ◁ or ▷ (I◀◀ or ▶▶I) repeatedly until the correct number is displayed on the screen (only if "SUPERIMPOSE" is set to "ON")(☞ pg. 14). Playback begins automatically when the desired recording is located.





Locating beginning of timer recordings — Instant Review

After ensuring that the VCR is turned off and that the timer mode is disengaged, press **REVIEW** on the Remote.

- The VCR turns on, and rewinds to the index code indicating the beginning of the last timer-recorded program, then begins playback automatically.
- You can access a program of 2 to 9 index codes away from the current position on the tape. If, for example, you have 5 programs recorded and you want to watch the third one, press **REVIEW** three times.
- The Instant Review function will also operate if the VCR is turned on.

Skipping unwanted portions — Skip Search

Press **SKIP SEARCH** on the Remote once to 4 times during playback. Each press initiates a 30-second period of high speed playback (up to 2 minutes). When the specified portion of the tape is skipped, normal playback resumes automatically. To return to normal playback during Skip Search, press **PLAY** (▶).

Recording

Accidental erasure prevention
To prevent accidental recording on a recorded cassette, remove its record safety tab. To record on it later, cover the hole with adhesive tape.

Record safety tab

Basic Recording

Turn on the VCR and TV, and select the VCR channel (or AV mode).

1 Load a cassette

Make sure the record safety tab is intact. If not, cover the hole with adhesive tape before inserting the cassette.
- The VCR turns on, and the counter is reset, automatically.

2 Select recording channel

Press **CH** △/▽ or the **Number keys** on the Remote or press **CH+/–** on the VCR.

NOTES:
- *You can select channel in the stop mode, recording pause mode or during rewind/fast-forward.*
- *If you connect the TV and the VCR only using the RF connection (☞ pg. 5), press **TV/VCR** on the Remote so that the VCR mode indicator lights on the display panel, to view the program to be recorded.*

3 Set tape speed

Press **SP/EP**. The selected tape speed will appear on the TV screen.

4 Start recording

On the VCR, press **REC** (●). Or on the Remote, while holding **REC** (●), press **PLAY** (►).

During recording		
Pause recording		
Press **PAUSE** (❚❚) on the Remote. ● Press **PLAY** (►) to resume recording. ● You can select channel in the recording pause mode.		
Stop recording		
Press **STOP** (■) on the Remote.	**OR**	Press **STOP/EJECT** (■/⏏) on the VCR.

NOTE:
*If the tape reaches its end during recording, the recording stops and "◯" and "▷" on the display panel blink. Press **STOP/EJECT** (■/⏏) on the VCR to eject the cassette or press **REW** (◄◄) on the Remote to rewind the tape.*

Recording Features

Turn on the VCR and TV, and select the VCR channel (or AV mode).

Specifying recording length — Instant Timer Recording (ITR)

During recording, press **REC** (●) on the VCR repeatedly until the recording length you want appears on the display panel. The record indicator (◯) on the display panel starts blinking.
- Each time you press the button, recording length increases in 30-minute intervals (up to 6 hours).
- The VCR shuts off after recording is finished.
- To cancel an ITR, press **STOP** (■) on the Remote or **STOP/EJECT** (■/⏏) on the VCR.

Watching one program while recording another

During recording…
- If you connect the TV and the VCR only using the RF connection (☞ pg. 5) to view pictures from the VCR, press **TV/VCR** on the Remote so that VCR mode indicator goes off from the display panel. (The TV broadcast being recorded disappears.)
- If you are using the AV connection (☞ pg. 5) to view pictures from the VCR, change the TV's input mode from AV to TV.

Then, select the channel you want to watch, on the TV.

Second Audio Recording

This VCR's built-in MTS decoder enables reception of Multichannel TV Sound broadcast. To record a SAP program received, set "2ND AUDIO RECORD" to "ON" (☞ pg. 14).

Timer Recording

Up to 8 timer recording programs can be made using Express timer programing method as far as a year in advance. Remember, the clock must be set before you can program the timer.

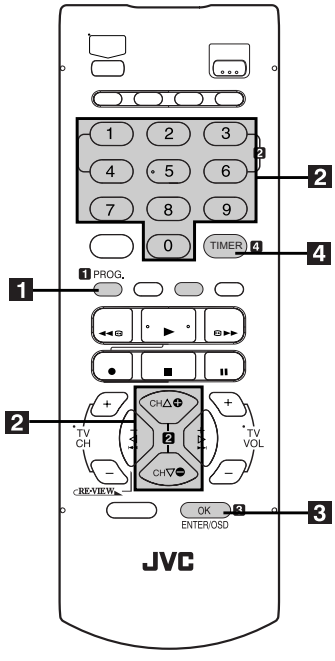
NOTES:

- *If all the 8 programs have already been set, "PROGRAM FULL" appears on the TV screen.*
- *After timer recording is completed, the VCR turns off automatically.*
- *You can program the timer recording while a regular recording is in progress; the menu screens will not be recorded.*
- *If the tape reaches its end during timer recording, the recording stops and "◴", "◯" and "▷" on the display panel blink. Press **TIMER** to disengage timer, then press **STOP/EJECT** (■/⏏) on the VCR to eject the cassette or press **POWER** ⏻/I then press **REW** (◀◀) to rewind the tape.*

Turn on the VCR and TV, and select the VCR channel (or AV mode).

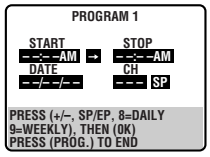
Express Timer Programing

Load a cassette with the record safety tab intact. The VCR turns on, and the counter is reset, automatically.



1 Press **PROG.** on the Remote to access the Program screen.

2 Press **START ⊕/⊖** (**Number keys "1" and/or "4"**), **STOP ⊕/⊖** (**Number keys "2" and/or "5"**), **DATE ⊕/⊖** (**Number keys "3" and/or "6"**), or **CH ⊕/⊖** repeatedly to enter the start time, stop time, date or channel.



- Press and hold **START ⊕/⊖** or **STOP ⊕/⊖** to increase the time in 30-minute intervals.
- To set the tape speed, press **SP/EP**.
- To timer-record daily (Monday–Friday) or weekly serials, press **DAILY** (**M-F**) (**Number key "8"**) or **WEEKLY** (**Number key "9"**). Pressing the button again makes the "DAILY" or "WEEKLY" display disappear.

3 Press **OK** or **PROG**.

- If "PROGRAM NOT COMPLETED PROGRAM OVERLAP" appears, see "Program overlap warning display" (☞ pg. 12).

4 Press **TIMER**. The VCR turns off automatically and "◴" is displayed on the display panel.

To use the VCR while it is in timer recording standby mode

Press **TIMER**, then press **POWER** ⏻/I. After you use the VCR, press **TIMER** again to put the VCR into timer recording standby mode.

Checking, canceling or changing program settings

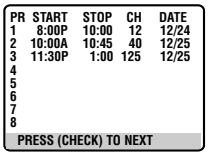
1 Disengage timer

Press **TIMER**, then press **POWER** ⏻/I.

- When "AUTO TIMER" (☞ pg. 13) is set to "ON", you do not have to press **TIMER**.

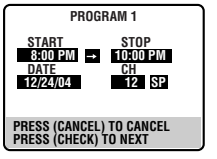
2 Access Program Check screen

Press **PROG. CHECK**.



3 Access Program screen

Press **PROG. CHECK** again. Each time you press **PROG. CHECK**, the next program's Program screen appears.



4 Cancel or change program setting

To cancel a program, press **CANCEL** when the Program screen you do not want is shown.

To change a program, press the appropriate button: **START ⊕/⊖** (**Number keys "1" and/or "4"**), **STOP ⊕/⊖** (**Number keys "2" and/or "5"**), **DATE ⊕/⊖** (**Number keys "3" and/or "6"**), **CH ⊕/⊖**, **DAILY** (**M-F**) (**Number key "8"**), **WEEKLY** (**Number key "9"**) and/or **SP/EP** when the Program screen on which you want to make changes is shown.

5 Return to normal screen

Press **PROG. CHECK** repeatedly until no Program screen is shown.

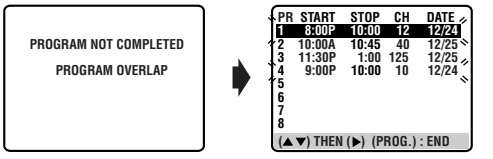
6 Reengage timer recording standby mode

Press **TIMER**. The VCR turns off automatically and "◴" is displayed on the display panel.

- When "AUTO TIMER" (☞ pg. 13) is set to "ON", the timer recording standby mode automatically resumes when you turn off the VCR.

Program overlap warning display

If "PROGRAM NOT COMPLETED PROGRAM OVERLAP" appears, you have another program overlapping the program you have just made. The Program Check screen appears and conflicting programs will start blinking.

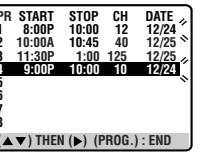


Example:
Program 1 (you have just made) and Program 4 overlap each other

1 Select program to modify

Press △▽, then press ▷.

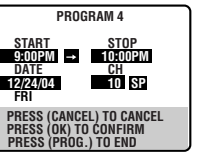
- You can only select one of the overlapping programs.
- If you do not mind this overlap, press **PROG.** to finish the timer program setting. The program starting earlier or program with the lower program number will be recorded.



2 Cancel or change program setting

To cancel a program, press **CANCEL** when the Program screen you do not want is shown.

To change a program, press the appropriate button: **START ⊕/⊖** (**Number keys "1" and/or "4"**), **STOP ⊕/⊖** (**Number keys "2" and/or "5"**), **DATE ⊕/⊖** (**Number keys "3" and/or "6"**), **CH ⊕/⊖**, and/or **SP/EP** when the Program screen on which you want to make changes is shown, then press **OK**.

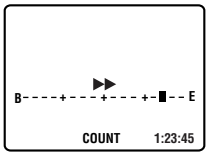


- If the overlap is not yet solved, the conflicting programs will be shown on the Program check screen. Repeat the above steps again.

Other Functions

Checking tape position

When you change the VCR operation mode from the stop mode to fast forward or rewind mode, or when you perform an Index Search or Instant Review, the tape position indicator appears.
The position of "▮" in relation to "B" (Beginning) or "E" (End) shows you where you are on the tape.



- Set "SUPERIMPOSE" to "ON".(☞ pg. 14)

Changing display information

Each time you press **DISPLAY**, the display panel shows the channel number and the clock time alternatively.

- You can change display in the stop, recording or during rewind/fast-forward.
- When "SUPERIMPOSE" is set to "ON" (☞ pg. 14) and **DISPLAY** on the Remote is pressed, time counter will appear on the TV screen. To reset the time counter, press **C. RESET** on the Remote.

Timer warning display

A warning appears on the TV screen to tell you that the timer-recording is to start in 5 minutes if you are not in the timer recording standby mode at that time. Press **TIMER** to put the VCR into timer recording standby mode. To clear the display, press **CANCEL** on the Remote.

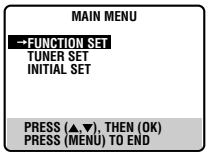
Function settings

You can use the other useful function settings on the Function Set screen.

Turn on the VCR and TV, and select the VCR channel (or AV mode).

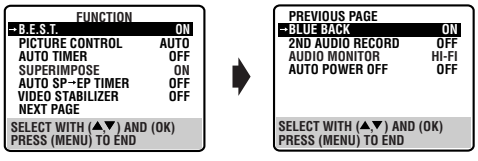
1 Access Main Menu screen, then Function Set screen

Press **MENU** on the Remote. Press △▽ to move the highlight bar (arrow) to "FUNCTION SET", then press **OK** or ▷.



2 Select Function

Press △▽ to move the highlight bar (arrow) to the function you want to set.



3 Change setting

Press **OK** or ▷. The default setting is **bold** in the following table.
Press **MENU** to return to normal screen.

■ B.E.S.T. — **ON**/OFF

When B.E.S.T. (Biconditional Equalised Signal Tracking) system is set to "ON", the recorder checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible pictures. B.E.S.T. takes place whenever you play back a tape or start recording after inserting a cassette.

NOTE:

The recorder checks the tape condition for about 7 seconds, then starts recording. To make sure you record the desired scene or programme completely, perform the following steps:

1 Press and hold ❚❚, and press ●. After about 7 seconds, the recorder re-enters Record Pause mode.
2 Press ► to start recording.

■ PICTURE CONTROL — **AUTO**(NORM)/EDIT/SOFT/SHARP

This function helps you to adjust the playback picture quality according to your preference.
AUTO(NORM): Normally select this. Picture quality is adjusted automatically. When B.E.S.T. is set to "OFF", the Picture Control will display "NORM".
EDIT: Minimizes picture degradation during editing (recording and playback).
SOFT: Reduces image coarseness when viewing overplayed tapes containing much noise.
SHARP: Clearer, sharper-edged picture when viewing images with much flat, same-colored surfaces such as cartoons.

NOTE:

Select "EDIT" when you are editing tapes. After you finish editing the tapes, select "NORM".

■ AUTO TIMER — ON/**OFF**

- **When this function is set to "ON":**

The timer recording standby mode is automatically engaged when the VCR is turned off. It is temporarily canceled when the VCR is turned on. You do not have to press **TIMER** to engage or disengage the timer recording standby mode.

- **When this function is set to "OFF":**

You have to press **TIMER** to engage or disengage the timer recording standby mode.

■ SUPERIMPOSE — **ON**/OFF

When this function is set to "ON", various VCR status information (on-screen display) appears on the screen.

NOTE:

When you use this VCR as the playback VCR for editing a tape, be sure to set this function to "OFF"; otherwise, the VCR status information (on-screen display) will be recorded on the edited tape.

■ AUTO SP→EP TIMER — ON/**OFF**

When this function is set to "ON", the VCR automatically switches to EP mode to allow complete recording if there is not enough tape to record the entire program while timer-recording in SP mode.

For Example, Recording a program of 140 minutes in length onto a 120-minute tape

Approximately 110 minutes	Approximately 30 minutes
SP mode	EP mode

NOTES:

- *If you have programed the VCR to timer-record 2 or more programs, do not use this function, but change the tape speed manually during timer programing.*
- *There may be some noise and sound disturbance where the tape speed switches from SP to EP mode on the tape.*
- *This function is not available during ITR (Instant Timer Recording), and will not work properly on the following tapes: T(ST)-30, T(ST)-60, T(ST)-90, and T(ST)-120.*

■ VIDEO STABILIZER — ON/**OFF**

When this function is set to "ON", you can automatically correct vertical vibrations in the picture when playing back unstable recordings made on another VCR.

NOTE:

To watch recordings with close-caption or when you finish viewing a tape, set this function to "OFF".

■ BLUE BACK — **ON**/OFF

When this function is set to "ON", the TV screen becomes all blue when receiving a channel not in use.

NOTE:

When you want to receive an unstable channel with poor signals, set this function to "OFF".

■ 2ND AUDIO RECORD — ON/**OFF**

- **When this function is set to "ON";**

If a SAP program is received, the SAP audio is recorded on both the normal and Hi-Fi tracks. The main audio is not recorded.
If a non-SAP program is received, the main audio is recorded on both the Hi-Fi and normal tracks.

- **When this function is set to "OFF",** the SAP audio cannot be recorded.

NOTES:

When the channel is changed on the VCR;

- *The "STEREO" indication appears on the screen for about 5 seconds if the program is a stereo broadcast.*
- *The "SAP" indication appears on the screen for about 5 seconds if the program is a SAP broadcast.*
- *Both indications appear when a stereo program is accompanied by SAP sound.*

■ AUDIO MONITOR — **HI-FI**/HI-FI L/HI-FI R/NORM/MIX

This VCR can record two sound tracks simultaneously (normal and Hi-Fi) on a Hi-Fi stereo tape. You can select the sound track(s) to listen to while playing back a Hi-Fi stereo tape. In addition, when playing back a prerecorded tape containing two separate audio programs on the Hi-Fi tracks, you can choose either one by selecting either "HI-FI L" or "HI-FI R".

HI-FI: Normally select this. Hi-Fi sound is played back.
HI-FI L: Sound on the left Hi-Fi channel is played back.
HI-FI R: Sound on the right Hi-Fi channel is played back.
NORM: Sound on the normal track is played back.
MIX: Both sounds on the Hi-Fi track and normal track are mixed and played back.

NOTES:

- *While playing back a monaural tape, sounds on the normal track will be heard regardless of this setting.*
- *If RF connection is used for viewing pictures on the TV, sound will be monaural even though you select "HI-FI".*
- *You can also use the **A. MONITOR** button on the Remote to select the desired monitor sound.*

■ AUTO POWER OFF — 3H/**OFF**

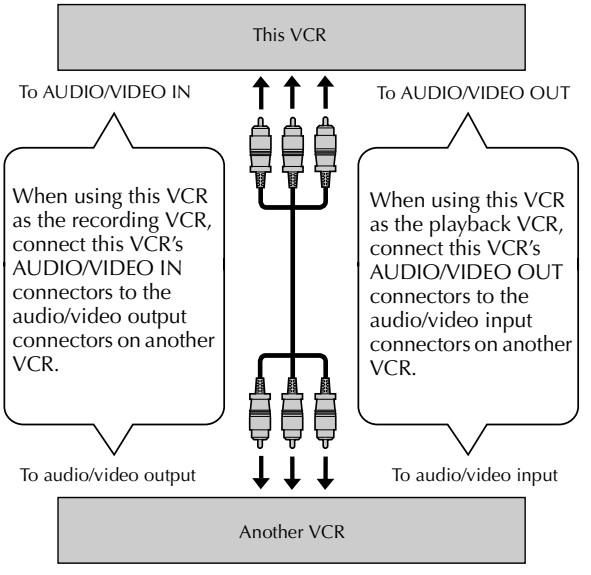
When this function is set to "3H", the recorder turns off automatically if no operation is done in 3 hours. "AUTO POWER OFF IN 3MIN" appears on the screen 3 minutes before the recorder is turned off.

Editing

You can use your VCR as the playback or recording VCR. You can use a camcorder as the playback VCR and your VCR as the recording VCR. Refer also to the other components' instruction manuals for connection and its operations.

1 Make connections

Example: When another VCR is VHS VCR


This VCR
To AUDIO/VIDEO IN
To AUDIO/VIDEO OUT
When using this VCR as the recording VCR, connect this VCR's AUDIO/VIDEO IN connectors to the audio/video output connectors on another VCR.
When using this VCR as the playback VCR, connect this VCR's AUDIO/VIDEO OUT connectors to the audio/video input connectors on another VCR.
To audio/video output
To audio/video input
Another VCR

- If another VCR is monaural, connect this VCR's AUDIO L IN (or OUT) connector to the audio output (or input) connector on another VCR.

2 Load cassettes

Insert the playback cassette into the playback VCR and the cassette to be recorded on into the recording VCR.

3 Select input mode on recording VCR

Select the correct external input on the recording VCR.
On this VCR (when using this VCR as the recording VCR);
Select "F-1" — when connecting the other VCR to the audio/video input connectors on the front panel.
Press **AUX** or **CH** △/▽ on the Remote or **CH+/–** on the VCR.

4 Select edit mode

Set the edit mode to "ON" for the VCRs if such a mode is equipped.

- On this VCR, set "PICTURE CONTROL" to "EDIT" (☞ pg. 13).

5 Start playback

Press **PLAY** (►) on the playback VCR.

6 Start recording

Press **REC** (●) on the recording VCR.

Specifications

GENERAL

Power requirement	:	AC 110 V – 220 V∿, 50 Hz/60 Hz
Power consumption		
Power on	:	14 W
Power off	:	3.1 W
Temperature		
Operating	:	5°C to 40°C
Storage	:	–20°C to 60°C
Operating position	:	Horizontal only
Dimensions (W x H x D)	:	360 mm x 98 mm x 255 mm
Weight	:	2.9 kg
Format	:	VHS NTSC standard
Maximum recording time		
SP	:	210 min. with T-210 video cassette
EP	:	630 min. with T-210 video cassette

VIDEO/AUDIO

Signal system	:	NTSC-type color signal and EIA monochrome signal, 525 lines/ 60 fields
Recording/Playback system	:	DA-4 (Double Azimuth) head helical scan system
Signal-to-noise ratio	:	45 dB
Horizontal resolution	:	230 lines
Frequency range		
Normal audio	:	70 Hz to 10,000 Hz
Hi-Fi audio	:	20 Hz to 20,000 Hz
Input/Output	:	RCA connectors (IN x 1, OUT x 1)

TUNER

Tuning system	:	Frequency-synthesized tuner
Channel coverage		
VHF	:	Channels 2–13
UHF	:	Channels 14–69
CATV	:	113 Channels
RF output	:	Channel 3 or 4 (switchable; preset to Channel 3 when shipped) 75 ohms, unbalanced

TIMER

Clock reference	:	Quartz
Program capacity	:	1-year programmable timer/ 8 programs

ACCESSORIES

Provided accessories	:	RF cable, Infrared remote control unit, Lithium battery – CR2032 –, Conversion plug

Specifications shown are for SP mode unless specified otherwise.
E. & O.E. Design and specifications subject to change without notice.

Para el residente de México
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